REMARKS

I. INTRODUCTION

The above captioned Application was timely filed on July 26 of 2001 respecting an earlier Provisional Application filed August 1, 2000.

The above captioned Application contained two Claims. The Examiner's action of May 13, 2002 (Paper No. 11) cited art against these two Claims.

Amendment A (Paper No. 14) filed by Applicant on or about November 13, 2002 argued the patentability of the Claims over the art and added new Claims 3 thru 6. This Amendment A was prepared in accordance with the procedures in place at that time and in a manner and style as required by the Patent Office for responses.

In the next Office Action dated November 21, 2002 (Paper No. 16) the Examiner held that the November 13, 2002 Amendment A (Paper No. 14), as filed, did not comply with the newest and latest procedures. A Response to Notice of Non-Compliant Amendment A (Paper No. 17) was prepared and filed on or about December 11 of 2002, by Applicants in response to this Office Action.

The next Office Action (Paper No. 19) dated January 2, 2003 the Examiner held that the responses of November 13, 2002 and December 11 of 2002 as filed, were not fully responsive because they did not point out specific distinctions believed to render newly presented claims 3-10 patentable over the references.

Amendment B (Paper No. 29) and an accompanying Petition for Revival (Paper No. 22) was prepared and filed on December 30, 2003. The Petition for Revival was granted on January 12, 2004 (Paper No. 23).

The most recent Office Action of February 26, 2004 (Paper No. 31) was the Examining Attorney's response to Amendment B (Paper No. 29) which presented all new Claims; numbering Claims 11 thru 30. The newly presented claims 11-34 have been amended as indicated in the listing of claims beginning at page 2 herein. The four additional claims (31, 32, 33 and 34) added are directed to specific embodiments.

ARGUMENT

Reconsideration of the grounds of objections/rejections as expressed in this most recent Office Action of February 26, 2004 is earnestly

requested, in view of the following REMARKS, the amendments to the claims and the attached EXHIBITS; EXHIBIT 1 consisting of 3 figures, EXHIBIT 2 consisting of 3 figures, EXHIBIT 3 consisting of 1 figure, EXHIBIT 4 consisting of 1 figure, EXHIBIT 5 consisting of 1 figure and EXHIBIT 6 consisting of clean copies of paragraphs [0060], [0061], [0063] and [0064].

Also enclosed with the present Amendment C is Applicant's check in the amount of $113 [to cover 2 independent claims in excess of 5 ($43 ea. x 2=$86) and 3 dependent claims in excess of 20 ($9 ea. x 3=$27) is attached to the first page of the Amendment herein.

At the outset, the Examiner's attention is respectfully directed to the fact that any reference by undersigned to Specification language and/or drawing numerals in these REMARKS will be made with reference to those as contained in AMENDMENT B, as entered into the record.

II. PREAMBLE

As a preamble, Applicant's Attorney would like to summarize the Examiner's grounds of rejection as set forth below.

First, the Examiner rejects claims 11-30 as clearly anticipated by either Dworak et al.; Patent No. 4,465,444, issued August 14, 1984 (hereinafter Dworak) or Lipscombe; Patent No. 4,606,713, issued August 19, 1986 (hereinafter Lipscombe) under 35 U.S.C. 102(b).

Secondly, the same claims 11-30 are rejected as unpatentable over the combination of Kalle; Patent No. 2,936,717, issued May 17, 1960 (hereinafter Kalle) in view of Martin et al.; Patent No.4,127,365, issued November 28, 1978 (hereinafter Martin) under 35 U.S.C. 103(a); the non-obviousness requirement.

Thirdly, relying on 35 U.S.C. 112 (1), the Examiner rejects the written description in failing to describe the manner and process of using the invention as described e.g. the enablement requirement.

III. 35 U.S.C. §112(1) REJECTIONS

Applicant's undersigned Attorney chooses to first address the §112(1) rejections; to bring about a better understanding by the Examiner of the undersigned attorney's Remarks and Arguments respecting the remaining

§102(b) and §103(a) rejections based upon the prior art cited against this Application.

III(a). THE REJECTION ON §112(1)

First, undersigned attorney will address the Examiner's inquires and instructions which are underlined in the Office Action, Paper No. 15, dated 02/26/04, at page two, and quoted hereinafter;

> 1) "...how the sides of the gear housing are hydraulically clamped,..."
>
> and
>
> 2) "...what part of the cover members are urged against the corresponding face of the gear housing by fluid pressure,";
>
> and
>
> 3) "how both covers can be biased by fluid pressure at the same time since one chamber, e.g. 15a, is under discharge pressure; but the other chamber, e.g. 16a, is under suction pressure."

III(b). SPECIFIC ANSWERS

1) The sides of the gear housing are hydraulically clamped by reason of the fact that the pump is immersed in the fluid in the cavity. In fact, when the pump is operating, the fluid within the pump and fluid surrounding the

pump, are in a hydraulic continuum. As a consequence of this hydraulic continuum, the pressure of the fluid within the pump, as generated by the rotating gears, is transmitted hydraulically to the fluid outside of the pump and yet within the cavity. This phenomena, identified as a hydraulic continuum, is perhaps easier to realize if one realizes the pump is operating in a range from 3,500-5,500 revolutions per minute (rpm) and at a pressure of from 500 to 3,000 pounds per square inch (psi). Thus, the pressure created within the pump is transmitted hydraulically to the fluid outside of the pump by the rotation of the pump's gears. And this pressure is exerted against the outer surface area of the pump elements consisting of cover members, the gear housing and the end cap members. Since this hydraulically transmitted pressure acting on the outer surface area, creates a force throughout the fluid, which exerts a clamping force which exceeds that force existing within the pump.

2) Next, "...what part of the cover members are urged...face...by fluid pressure,"?

It is believed that the answer to "...what part..." has already been answered. Thus, it is the force exerted against the entire outside surface area

which urges the cover members and the end cap members against the corresponding face of the gear housing.

3) As to the third inquiry, both covers can be biased by fluid pressure at the same time because there is no suction pressure, as such. There is only one pressure or force in the hydraulic continuum, which exists inside the pump and outside the pump. In other words, both chambers are under pressure. There is no suction pressure in the pump interior. There is, of course, suction at the inlet port used for introducing fluid into the pump.

III(c). EXPLANATION OF THE FORGOING ANSWERS

Applicant's undersigned attorney plans to have an actual working model of the bi-rotational pump of the present invention in the hands of the Examiner by the time, or, at the same time as he gets this Amendment C. With the working pump in hand, and as well the accompanying EXHIBITS 1, 2 and 3; the Examiner should be able to understand the answers given herein before. It is believed that with this material before him that he will be better able to understand the drawings of the Application for Letters Patent.

This understanding will also lead the Examiner to conclude that the enablement requirement is satisfied.

The explanation to follow will also be based on certain schematic drawings (the EXHIBITS) and these will thereafter be tied into actual parts of the pump structure shown in the drawings of the captioned Application.

The EXHIBITS include EXHIBITS 1, 2, and 3 which are pictorial representations of an actual working pump showing the pressures and forces as discussed above.

The existence of the actual pump together with the numerals and terms used in identifying the parts (See **III(d) CORRELATION OF PARTS** hereinafter) should aid in establishing the workability of the pump and also satisfy the enablement requirement by reason of the Statute.

EXHIBIT 1 consists of three figures.

FIG.1, is a perspective view of an actual pump of the present invention.

FIG. 2 is a sectional view of the pump shown in FIG. 1. EXHIBIT 1, and employs color coding, wherein the color blue, identifies the pressure at the "inlet" port corresponding to numeral "8a" of the Application

drawings. Of paramount interest, is the area that is color coded red as confined by the cavity, with the pressure being exerted against the greater outer surface areas of the pump thereby producing a "clamping force". This surface area (red) represents a significant force exerted axially inwardly by reason of the larger outer surface area of the pump's parts as urged earlier.

FIG. 3, is an exploded view of the pump of EXHIBIT 1, FIG. 1 shown in perspective view and it can be noted using language used throughout the Application for Letters Patent.

EXHIBIT 2 consists of three figures;

FIG. 1, is an axial projection (section A-A) of the pressurized area in FIG. 3. Section A-A is through the center of the gear housing and therefore generates the expected figure "8" cavity as representing the pressure within the pump as generated by the rotation of the gears.

FIG. 2, is an axial projection (Section B-B or C-C) of the pressurized area at either end of the pump. This FIG. 2 annular projection either B-B or C-C represents a clamping force greater than that in FIG. 1.

FIG. 3, is a schematic side elevation view showing the

cavity which contains the pump of EXHIBIT 1, FIG. 1 and showing the sections A-A, B-B and C-C in a counterclockwise rotation of the pump. Attention should also be directed to the language printed to the left of each of the figures which will assist the Examiner's understanding of the principle of pressure clamping.

III(d). CORRELATION OF PARTS

The attention of the Examiner is now directed to EXHIBIT 3, which consists of a single figure which is slightly larger than EXHIBIT 2, FIG 3. Here we commence the correlation of the numerals and terms of the parts of the pump. Thus, on EXHIBIT 3, we see top cavity (16a), top cap member (31), top cover member (29), the gear housing (34), bottom cover member (26), bottom cap member (24), and the bottom cavity/chamber (15a).

Having shown a correlation in the numerals and terms identifying parts as used in the EXHIBITS, specifically EXHIBIT 3, and the numerals identifying the same parts in FIGS. 4, 5 and 6; it would be appropriate to direct the Examiner's attention to FIGS. 9, 10, 11 and 12 of the drawings in the Application. FIGS. 9, 10, 11 and 12 as can be seen are detailed drawings

of the actual hardware used in making and assembling preferred embodiments of the present invention.

Starting with FIG. 11, (an axially exploded view) there is shown the top end cap (31) and then we see top cover member (29) in spaced parallel relationship. Also shown is drive shaft (35) idler shaft (37) dowel pins (47) and (48). [See also pilot piston (19a) and outlet (49)]

In FIG. 12 there is shown, the opposite bottom end cap member (24), the bottom cover member (26) and the gear housing (34) all in spaced apart relationship. Clearly cover member (26) will assume flush relationship with the gear housing (34) when the parts are urged to the left into assembled relationship including gears (40) and (42) located in the expected figure "8" configuration of the cavity in the gear housing (34) in which cavity gears (40) and (42) will rotate. Also to be noted is pilot piston (25) and ball valve (20a).

Referring now to FIG. 9, a horizontal, partial side elevation of the actuator (3a), partly in section; in order to show the end of the drive shaft (35) just to the right of the electric motor 1-a (See FIGS. 1 and 2). Further we can see gear (40), gear (42), the idler shaft (37), end cap members (31)

on the left and (24) on the right, cover member (29) on the left and (26) on the right.

Rotation of the gear's drive shaft (35) will cause the intermeshing gears to rotate resulting in fluid exiting the pump out either conduit (6a) or (7a), depending upon the direction of rotation of the drive shaft and gears. Thus, a counterclockwise movement of the drive shaft (35) and the connected gears will move fluid under pressure out conduit (6a) leading to the left side of the pump (2a) which will urge the piston (4b) to the "extend" position. A clockwise movement of the drive shaft (35) will move fluid under pressure from upward chamber (15a) or (16a) out conduit (7a), which proceeds upwardly and to the right to the opposite end of the actuator/cylinder (3a). (See FIG. 10) The fluid pressure at the right end of the actuator (3a) moves the piston (4b) to the left (although not shown) into a "retract" position.

In the interest of further enlightenment, the Examiner's attention is respectfully directed to FIG. 5 and amended paragraph [0063] of the Specification including TABLE X, which appears in amended paragraph [0060].

[In the interest of convenience EXHIBIT 6 (attached hereto) consists of clean copies of paragraphs [0060], [0061], [0063] and [0064] added in Amendment B.]

TABLE X was prepared in order to show the different valves and their position as open and closed. The six ball valves are identified by numerals in the left hand column. See the language below TABLE X for an explanation of the open or closed position of ball valves depending upon the direction of rotation of the drive shaft..."cw" or "ccw". And the corresponding position of the piston (4b) and connected shaft (35) in the "extend" or "retract" (See FIG. 5 and/or 6).

Referring now to amended paragraph [0063] (See EXHIBIT 6 for a clean copy) the drive shaft (35) is rotating in a "ccw" direction of rotation.

The gears (40) and (42) secured to the drive shaft (35) and located within the gear housing (34) are rotating in intermeshing relationship and directing fluid under pressure outwardly into contact with nearby pilot piston (4b) moving it upwardly. At the same time pressure is exerted against the spring opposed ball (21a) compressing same to open the valve. Simultaneously, fluid pressure against ball (20a) closes the opening.

The immediate result is an increase in the pressure in chamber (15a) resulting in the direction of flow downwardly through now open ball valve (21a) proximate the outlet leading to conduit (6a) and upwardly to the actuator (3a) there above. The pressure

increase in the right hand side of the actuator (3a) there above moves the piston (4b) to the left to an "extend" position urging fluid to the left and downwardly through conduit (7a) to upper chamber (16a). The aforesaid upward movement of pilot piston (19a) compresses the ball (18a) against the spring (not shown) to allow fluid to flow there through into chamber (16a). [The fluid flow is gradual to compensate for the fluid being displaced from the actuator downwardly through conduit (7a) to return to chamber (16a)]

As can be further seen, the pilot piston (25) is not affected by the pressure in (15a) and remains closed while ball (28) is moved upwardly to open by reason of the slowly increasing pressure in chamber (16a) allowing fluid to flow there through and return to the reservoir (13a).

It is urged that with the above detailed description of FIG. 5, it will not be necessary to describe FIG. 6 in such detail since reference to amended paragraph [0064] (See EXHIBIT 6 for a clean copy) taken in conjunction

with the same TABLE X, reveals that in this case the shaft (35) is rotating in a clockwise (cw) direction which reverses the direction of the rotation of the gears to reverse the direction of fluid flow. This change in the direction of fluid flow, causes the valves that were open to become closed and the valves that were closed to become open. As a consequence the fluid under a greater pressure proceeds out of upper chamber (16a) conduit and up conduit (7a) continuing to the actuator (3a) moving the piston (4b) to the right into the "retract" position. This movement of the piston to the right causes displaced fluid to flow down conduit (6a) into chamber (15a).

It is urged that the foregoing is sufficient to enable one to knowledgeably view the other figures such as, FIG. 7 being an end view of the bottom cap member (31) together with the drive shaft (35) and the idler shaft (37) and also sections taken therein namely horizontal section 8-8 and vertical section 15-15. These sections 8-8 and 15-15 are seen in Application drawings FIG. 8 and FIG. 15 respectively. In each of these figures the parts are identified by the same numerals as used in FIGS. 4, 5, 6, 9, 10, 11 and 12 and EXHIBIT 3 and as well, EXHIBIT 1, Tables 1, 2 and 3.

While not being bound to any theory; it is believed that the unique, combination, design, location and choice of unopposed ball valves (28) and (20a), spring opposed ball valves (21a), (23), (18a) and (30); together with the location, choice and combination of pilot valves (19a) and (25), together with the unique location and design of the passageways as interrupted by the aforesaid valves, cooperate to achieve a pumping of the fluid in one direction and also enables the reverse in that direction of flow of fluid by reversing the direction of rotation of the gears, which are secured to the shaft (35) and as controlled by a three-positioned switch. Furthermore, it is realized that the pump as identified and detailed hereinabove can be fluidly connected top opposite ends of a hollow body (usually a closed cylinder) containing a piston and connected piston rod which is capable of moving in either direction depending upon the rotation of the shaft and gears. First, in one direction which can be translated through the piston rod to any application desirably moved in a linear path of finite dimensions and to do so repeatedly and steadily over an extended period of time.

It is further urged that the entirety of Section III taken in conjunction with the actual examination of the pump attached to the present Amendment,

which is designed and constructed in accordance with the present invention, will satisfy the Examiner that Applicant's claims are not clearly anticipated by the art references relied upon by the Examiner.

IV REJECTION ON ART

First, the Examiner's attention is directed to the "PREAMBLE" hereinabove for a summary of the grounds of rejection and for convenience that summary will be repeated hereinafter.

"First, the Examiner rejects claims 11-30 as clearly anticipated by either Dworak et al. or Lipscomb under 35 U.S.C. 102(b)."

"Secondly, the same claims 11-30 are rejected as unpatentable over the combination of Kalle in view of Martin et al. under 35 U.S.C. 103(a); the non-obviousness requirement."

"Thirdly, ...relying on 35 U.S.C. 112 (1),..."

The third part of the summary has been addressed previously herein in section part number III.

IVa THE REJECTION ON 35 U.S.C. 102(b)

It is perceived that the Examiner's rejection is stated in rather general

terms. Thus, the Examiner relies upon two references:

Dworak

or

Lipscomb

and holds claims 11, and 30 as clearly anticipated by these references.

Nominally, this rejection would require that one find all of the elements or parts (or their equivalents functioning in essentially the same way) that are claimed by Applicant; in each of the above references. *Shanklin Corp. v. Springfield Photo Mount Co.*, CA 1 (Mass.) 1975, 521 F2d 609.

An Ohio court has phrased it somewhat differently ...there is no anticipation unless all of the same elements are found in the same situation and united in the same way to perform an identical function. *Holmes v. Thew Shovel Co.*, D.C. Ohio 1969, 305 F.Supp. 139; *Verdegal Bros., Inc. v. Union Oil Co.*, (CAFC 86-1258); 814 F.2d 628; 2 U.S.P.Q. 1051.

Not withstanding these rather general terms as used by the Examiner hereinabove Applicant's attorney will make reference to parts and

relationship of parts identified by numerals that will distinguish Applicant's claims as patentable over the references.

Thus, referring to Claim 11, the language of element (4), "...cover members..." and the definition there as, "...cover members being located in generally flush coextensive abutment with said gear housing and said intermeshing gears..." and the "...wherein..." clause, "...the total outer surface area of said housing and cover members is greater than the interior surface area of the pump...". This structure is not even hinted at by either Dworak et al. or Lipscombe.

An examination of the references Dworak et al. and Lipscombe fail to disclose the above quoted language and certainly nothing equivalent to that language, nor the functioning related thereto. It follows that Claim 11 is patentable as not clearly anticipated by either of the references. The latter conclusion also applies to dependent Claims 12, 13 and 14. [And of course, these claims contain additional distinguishing language over and above that of Claim 11, as follows.]

In Claim 12, see, "...wherein the gear housing and the cover members are surrounded by the pump's generated pressure..."

In Claim 13, see, "...the cover member are machined to define internal passageways..." nowhere suggested by the art.

In Claim 14, see, "...said internal passageways are machined to contain a plurality of ball check valve means...".

Claim 15, an independent Claim, is similarly patentable by reason of the following language, "...cover members located respectively on each side of said gear housing, in generally flush abutment with the surface of said gear housing and said intermeshing gears within...", this language is certainly not anticipated by either Dworak et al. or Lipscombe.

Claim 16, is dependent upon Claim 12, and so clearly patentable and brings in a pair of, "dowel pins", which further distinguishes the claims from the references Dworak et al. or Lipscombe.

Claim 17, is dependent upon Claim 16 and is additionally directed to a pump, "... fluidly connected to a linear motor, which, extends, retracts and holds...". And additionally, "...check valve and pilot actuated check

valve...". The quoted language above is not clearly anticipated by Dworak et al. or Lipscombe.

Claim 18 is an independent Claim, drawn to a hydraulic gear pump, "...said pump comprising...two cover members...characterized by an outside axial area larger that its inside axial area,...whereby cover members are hydraulically clamped..." that differentiates from either the Dworak et al.or Lipscombe references.

Claim 19 is dependent upon Claim 18 and therefore fully patentable as Calim 18, but in addition is directed to a, "...pump plus an actuator...located in a hollow body...", This language further distinguishes Claim 19 as patentable over the references.

Claim 20, is dependent upon Claim 18 and accordingly patentable, but in addition includes the language, "...cover members to define passageways and voids for ball valves...".

Claim 21, also dependent upon Claim 18, and is similarly therefore fully patentable for the same reasons as stated above and otherwise contains the language, "...wherein the pressure outside the pump...at least...the

pressure inside the pump...". Additionally contains, "...end cap members...each having facing surfaces which are machined..." which is not suggested nor taught by any of the references in the sense of anticipation of section 102(b).

Claim 22, dependent upon Claim 18, and is therefore obviously fully patentable as Claim 18 and besides has distinguishable language as follow, "...cover members...generated pressure...rotation of said pump...pressure on the inside...outside of the pump...the same...".

Claim 23, dependent upon Claim 12 and is therefore patentable for the same reasons, but additionally defines, "...a radial seal...".

Claim 24, being directed to the combination of a "linear actuator" and "a pump" has not been addressed by the most recent office action. The same can be said of Claims 25, 26, 27, 28 and 29.

Claim 27 is dependent upon Claim 16, and therefore is patentable, but in addition has distinguishable language as follows, "...two or more dowel pins...".

Claim 28, dependent upon Claim 15 is clearly patentable and in addition contains distinguishable language as follows, "...a fluid reservoir...surrounding said hydraulic pump...".

Claim 29 is dependent upon Claim 27 and in turn dependent upon Claim 16 and therefore is clearly patentable over the references.

Claim 30 is an independent claim, which is a new Claim, and, is directed to a combination of, "...an elongate hollow body having a piston and a piston rod...a bi-rotational pump...". The quoted language of Claim 30 is not found in either Dworak et al. or Lipscombe.

Claim 31 is an independent claim directed to a "gear pump" comprising, "...cap members...machined...define...internal passageways...". Accordingly, Claim 31 is fully patentable over the references Dworak et al. or Lipscombe. Further Claims 32, 33 and 34 are also fully patentable because in addition each claim contains distinguishable language.

IVb THE REJECTION ON 35 U.S.C. 103(a)

This leaves the rejection, on 35 U.S.C. 103(a), the non-obviousness section, as recited herein in the PREAMBLE and such rejection is repeated just below for convenience of the Examiner.

"...the same claims 11-30 are rejected as unpatentable over the combination of Kalle; Patent No. 2,936,717, issued May 17, 1960 (hereinafter Kalle) in view of Martin et al.; Patent No.4,127,365, issued November 28, 1978 (hereinafter Martin) under 35 U.S.C. 103(a); the non-obviousness requirement."

Also for convenience, the statutory section relied upon to wit, § 103(a) of Title 35 is set forth hereinafter.

§ 103(a). Conditions for patentability; non-obvious subject matter

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time of the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negative by the manner in which the invention was made.

As noted hereinabove, in section **IVa THE REJECTION ON 35 U.S.C. 102(b)**, it is also perceived in this section that the Examiner's rejection on this statutory ground is stated in rather general terms. Thus, the

Examiner relied upon two references, Kalle in view of Martin et al., but with no reference to any parts of Applicant's drawings mentioned.

Several guidelines based on Hornebook Law follow.

1) § 103(a) requires that the subject matter as a whole must be obvious...in order to combine the teaching of one or more patents...,

2) one of them must suggest the desirability of the combination. *Vandenberg v. Dairy Equipment Co.*, 740 F.2d 1560, C.A. Fed. 1984; 224 U.S.P.Q. 2d, 195.

3) It is generally agreed that one cannot "pick" and "choose" certain parts or elements, selected from one reference, with another "pick" and "choose" exercise from another reference, and combine them to arrive at some composite which is relied upon to support an obviousness rejection.

4) Each patent reference must be examined in its entirety in order to make the rejection appropriate. This is especially true since Applicant insists we are dealing with an entirely new concept here, which is that of a pressure "clamped" pump.

5) The mere fact that the same elements appear in a claim as in a reference, does not meet the test of § 103(a) since the invention as claimed may reside in the novel functions of the elements in combination. *BVlumcraft of Pisttsburg v. Citizens and Southern Nat. bank of S. C.*, W.D.S.C 1968, 286 F.Supp. 448.

With these thoughts in mind, it is urged that a careful review of the entirety of each of the references, Kalle and Martin et al., find no support for the position that any combination of these references to meet Applicant's claims.

Thus, the recitation of certain parts or functions, as quoted at page 28 hereinabove, as not being clearly anticipated by either Dworak et al. and Lipscombe and these parts and functions represent "the differences" referred to in § 103(a).

It is strenuously urged that "these differences" are not made obvious by a combination of the Kalle and Martin disclosures viewed in their entirety by one ordinarily skilled in the art.

Thus, even if one sees parts or identifies parts in "these differences", there is no teaching seen in either Kalle or Martin et al. of the value as

assembling these parts as Applicant has done to arrive at a really novel result.

The foregoing should satisfy the Examiner's rejection stated in general terms, as noted hereinabove.

Rather than rely on the previous paragraph, Applicant's Attorney's assertion that Applicant's invention constitutes a totally new concept which is that of a pressure "clamped" pump! And this merits discussion more fully hereinafter.

Thus, Applicant's pressure "clamped" pump is achieved by the selection of known elements and parts, but the arrangement thereof represents a unique and novel exercise and the culmination thereof achieves a result neither, as clearly anticipated by Dworak or Lipscombe (in the sense of 102(b)), nor by the combination of Kalle and/ or Martin (in the sense of 103(a)). [It is emphatically asserted that the claims defining this pressure "clamped" pump are therefore patentable.]

V PRESSURE "CLAMPED" PUMPS VS. PRESSURE "BALANCED" PUMPS

In the interest of supporting the assertion as to Applicant's pressure "clamped" pump as being distinct and different from the pressure "balanced" pump; several schematic drawings will be described hereinafter. These schematic drawings are identified as EXHIBIT 4A and EXHIBIT 5.

EXHIBIT 4A is devoted to the structure of a pressure "balanced" pump and shows in the upper view, a perspective view, partially broken away, of a pair of intermeshing gears, mounted for operative pumping. While the lower figure is an exploded view, in perspective, showing the gears, the gear housing and the use of bearing blocks and as well, the use of cover members.

EXHIBIT 5 is a vertical section of a side elevation view of a pressure "clamped" pump showing the gears, gear housing, cover members and drive shaft.

Reference may now be made to EXHIBIT 4B for a text which if read carefully explains the difference between a pressure balanced pump and a pressure balanced pump.

It may be partially noted the Martin reference teaches away from Applicant's invention as claimed since any attempt to change the direction of rotation would result in the Martin pump self-destructing.

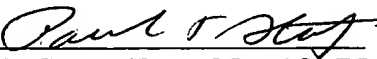
It should be further noted that Kalle discloses a pump having but a partial gear housing and discloses no end covers instead relying upon disclosed flexible flaps acting as partial gear covers. The Kalle pump is not truly bi-rotational; the pump generated pressure does not hold the pump together as does Applicant's invention as claimed.

Finally, it is urged and submitted that Applicant is the first person to have invented a pressure "clamped" pump by means of the choice and selection of parts and their arrangement in a specific manner and reversible rotation in a specific manner including machined surfaces of cover members and end cap members which achieve the unique result, which is not possible with any of the pressure balanced pumps.

It is urged that Applicant has made a bona fide effort to meet the Examiner's rejections and certainly to advance the prosecution of this Application.

Accordingly, it is believed that a favorable reconsideration is believed in order and such action is earnestly solicited.

Respectfully submitted,

By, 
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